

ABSTRACT OF THE DISCLOSURE

A positioning device for positioning a wafer table and an exposure apparatus including the positioning device are disclosed. The positioning device comprises a housing, a piezoelectric actuator, and a structure for moving the wafer table in a second direction. The piezoelectric actuator has a first and second end. The first end is fixedly mounted to the housing and the second end is movable in a first direction in response to a change in voltage applied to the piezoelectric actuator. The structure comprises a first joint, a second joint, a diagonal member, and a flexure. The first joint is movable in the first direction in response to the second end of the piezoelectric actuator moving in the first direction. The second joint is movable in the second direction to move the wafer in the second direction. The diagonal member is connected to the first and second joints at an angle with respect to the first direction. The flexure connects the diagonal member to the first joint and is bendable in response to the first joint moving in the first direction to change the angle with respect to the first direction and thereby move the second joint in the second direction.

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, DC 20005
202-408-4000